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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,513	10/19/2001	William L. Detore	TY2002US	3091

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EXAMINER

JOHNSON, VICKY A

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 06/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,513

Applicant(s)

DETORE ET AL.

Examiner

Vicky A. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Murakami et al (US 5,122,417).

Kimura et al disclose a hybrid composite flywheel rim comprising: at least two different types of fibers (col. 2 lines 50-66) impregnated with a thermosetting resin such as epoxy resin (col. 3 lines 64-67), said two different fibers having different elastic moduli (inherent); one of said two fiber types being randomly distributed amongst the other fiber macroscopically (col. 9 lines 20-30).

The method of forming the device is not germane to the issue of Patentability of the device itself. Therefore, the limitation "wound in an annulus on a mandrel" has not been given any patentable weight.

Re claim 5, fibers having different elastic moduli (inherent), said fibers including carbon fiber, glass fiber (col. 9 lines 26-31), said fibers fixed in a matrix of thermosetting resin such as epoxy resin (col. 3 lines 64-67); said carbon fiber is distributed amongst the other fiber in a cross hatch pattern macroscopically (col. 5 lines 61-66, the fiber material is laid over the previous layer at an angle of

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70° so that the carbon fiber forms a cross hatch pattern with respect to the glass fiber).

3. Claims 7 is rejected under 35 U.S.C. 102(a) as being anticipated by Kimura et al (6,299,718).

Kimura et al show an annular structure having a plurality of zones (col. 9 lines 4-31), each with multiple fiber layers in a resin matrix (col. 6 lines 26-31), each said fiber layer having a mixture of carbon fiber tows and glass fiber tows at a ratio of tows that is constant in each layer of any single zone (col. 9 lines 4-31), and said ratio incrementally increases zone-by-zone radially toward outside zones of said rim (col. 9 lines 11-30).

The method of forming the device is not germane to the issue of Patentability of the device itself. Therefore, the limitation "carbon fiber tows lie in a macroscopically uniform distribution in each zone by controlling the correlation between lead rate of the fiber band as it is wound onto the mandrel per mandrel revolution and the winding length" has not been given any patentable weight.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al (US 5,122,417).

Murakami et al disclose a hybrid composite flywheel rim as claimed except for the following equation being satisfied: $WL=(N + B/A) \cdot LR$.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the strength of the flywheel, since has been held to be with in the general skill of a worker in the art to achieve optimization through routine experimentation. *In re Boesch*, 205 USPQ 215 (CCPA 1980); *In re Svala*, 70 USPQ 412 (CCPA 1946).

Response to Arguments

Applicant's arguments with respect to claims 1 and 5 have been considered but are moot in view of the new ground(s) of rejection.

Some further comments regarding the Applicant's remarks are deemed appropriate.

The Applicant argues that the method of forming the device in regard to "wound in an annulus on a mandrel" is not a method of forming the device, and further states, "It merely explains the structure of the device." It is unclear what this statement means. Winding material on a mandrel is well known in the art as a method to form cylindrical articles.

It is further argued by the Applicant that the formula of claim 6 cannot be determined by routine experimentation. The winding length can be optimized through routine experimentation by changing the lead rate. A worker with a general skill in the art is able to achieve these results.

The Applicant's remarks have been accorded due consideration, however, they are not deemed fully persuasive.

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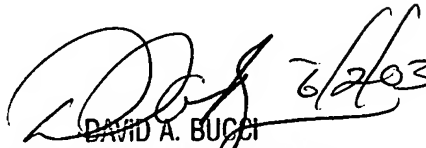
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vicky A. Johnson whose telephone number is (703) 305-3013. The examiner can normally be reached on Monday-Thursday (7:00a-5:00p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Bucci can be reached on (703) 308-3668. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

vaj *vaj 6/2/03*
June 2, 2003


DAVID A. BUCCI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600